

Md Ariful Hassan Mojumder

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Summary

- Three years of experience in the design and construction supervision of deep and shallow foundations.
- Expertise in performing slope stability analyses and seepage analyses of embankments.
- Experience in settlement calculation of foundations and embankments.
- Design of earth retaining structures e.g., MSE wall.
- Experience in site inspection/supervision.
- Three years of experience in field and laboratory geotechnical investigation.
- Proficiency in technical documentation (engineering drawing, reports, proposal, bid documents, etc.).
- **Registered Engineer-in-Training (EIT) at EGBC and Permanent Resident of Canada.**

Education

MS (Geotechnical Engineering)

Aug 2020

Louisiana State University, Baton Rouge, USA

(CGPA: 4.00/4.00)

Thesis: Evaluation of Undrained shear strength of soil, ultimate pile capacity, and pile setup from the Cone Penetration Test (CPT) using Artificial Neural Network (ANN).

BSc (Civil Engineering)

July 2014

Bangladesh University of Engineering and Technology, Dhaka

(CGPA: 3.62/ 4.00)

Software Skills

GeoStudio (Seep/W, Slope/W, etc.), Settle 3D, LPILE, APILE, GRL WEAP, Auto-CAD, Civil 3D, Rocscience RS3, Slide, PLAXIS, DrivenPiles, MatLAB, SAS, Grapher, **ETABS.**

Professional Experience

Geotechnical Engineer

Sep 2020 – Present

HNTB Corporation, Milwaukee, WI, USA

- Design of Driven Pile for Highway Bridges: Axial capacity, Drivability, Neutral Plane Analysis, etc.
- Design of Drilled Shaft for permanent sign structures over US Interstate Highway, I-96.
- Design of MSE Retaining Walls for Highway Bridges.
- Settlement Analysis of embankments using Settle3 software package.
- Slope Stability Analysis of embankments using SLOPE/W software package.
- Processing field and laboratory test data e.g., SPT, consolidation test data, etc.
- Preparation of technical memo and writing reports.

Assistant Engineer (Civil)

May 2016 – Jun 2018

Power Grid Company of Bangladesh Ltd. (PGCB), Dhaka, Bangladesh

- Geotechnical Design and construction quality assurance of drilled shafts.
- Slope Stability and Seepage analyses of the power substation lands beside the river.
- Conducting field and Laboratory tests of soil and reporting.
- Settlement calculation for shallow and deep foundations.
- Coordination among consultants (Japan), contractor (India), regulatory agencies (Bangladesh).
- Design and construction supervision of RCC buildings (6 storied) and retaining walls.
- Design and construction of the underground and overhead reservoir.
- Inspection of construction materials.
- Preparation of engineering drawings and monthly, quarterly, and annual reports.

Assistant Civil Engineer

May 2015 – Apr 2016

KAJOS Enterprise, Dhaka, Bangladesh

- Construction supervision of residential RCC buildings (6 storied).
- Coordinating site exploration e.g. SPT tests.
- Design and construction quality assurance of foundations.
- Inspection of construction materials.
- Preparing detailed engineering drawings and reports.



Lecturer

Aug 2014 – Apr 2015

Department of Civil Engineering, Presidency University, Bangladesh

- Lecture planning, preparation, and research.
- Syllabus preparation, test construction, grade assessment, and moderation.
- Academic advising of students.
- Lab preparation, and lab supervision.

Research Experience

Graduate Project Work

Aug 2018 – May 2019

Louisiana State University, Baton Rouge, USA

- Three-Dimensional (3D) Slope Stability and Seepage Analysis (using *Rocscience RS3*, and *GeoStudio*) of IHNC Floodwall, New Orleans, Louisiana.
- Slope Stability and Settlement Analysis (using *GeoStudio* and *Settle-3D*) of West Bank and Vicinity of Mississippi River Levee Protection Project, Louisiana.

Graduate Research Assistant

Aug 2018 – Aug 2020

Louisiana Transportation Research Center (LTRC), Baton Rouge, USA

- Collection of data e.g., soil borings, CPTs, etc.
- Conducting advanced lab tests e.g., Triaxial test, large direct shear test, SWCC, consolidation test, etc.
- Evaluation of undrained shear strength of soil from the Cone Penetration Test (CPT).
- Evaluation of Pile setup and Ultimate pile capacity from CPT and some other soil properties using ANN.
- Application of Cone Penetration Test (CPT) in the evaluation of different soil parameters.

Affiliation

- EIT at Engineers and Geoscientists BC (EGBC)
- EIT at Texas Board of Professional Engineers and Land Surveyors, USA
- Member of American Society of Civil Engineers (ASCE)
- Member of Deep Foundations Institute (DFI)

Publications

Journal Articles:

- Abu-Farsakh, M.Y, and Mojumder, M.A.H. (2020). Exploring Artificial Neural Network for Evaluating the Undrained Shear Strength of Soil from the CPT Data. *Transportation Research Record*, 2020.
- Mojumder, M.A.H., and Abu-Farsakh, M.Y (2021). Evaluation of Ultimate Pile Capacity of Driven Piles from the Cone Penetration Test Data using Artificial Neural Network. *Journal of Computing in Civil Engineering* (under review), 2021.
- Mojumder, M.A.H., and Abu-Farsakh, M.Y (2021). Evaluation of Pile Set Up Parameters from the Cone Penetration Test Data using Artificial Neural Network. *Journal of Computing in Civil Engineering* (under review), 2021.

References

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